How do people connected solely via smart phones and computers get info about emergencies? A researcher with the Center for Advanced Energy Studies (CAES) at INL is working with industry and government agencies to keep them informed.

Adapting emergency alerts to the Internet age

By Kortny Rolston, *INL Communications & Governmental Affairs*

Between tablets, smartphones, laptops and other devices, Americans are increasingly accessible to nearly everyone in their lives — co-workers, friends, family and others. Everyone that is, except police, fire departments and other emergency response organizations.

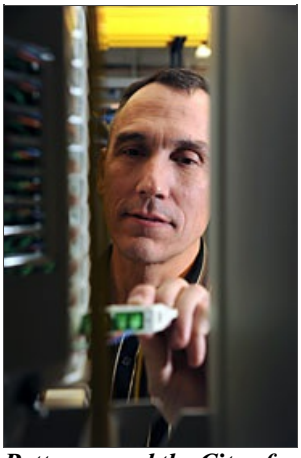
As people continue to ditch land lines for mobile devices, it is becoming increasingly difficult for those entities to reach residents during emergencies. Milos Manic — a University of Idaho professor and researcher with the Center for Advanced Energy Studies (CAES) at Idaho National Laboratory — is working with the city of Ammon, Albion Telephone Company and the Utah Telecommunication Open Infrastructure Agency (UTOPIA) to change that.

Bruce Patterson, the City of Ammon's technology director, adjusts the new notification equipment.

The team has received a $275,000-plus grant from the National Science Foundation to create a virtual emergency "channel" to alert people of emergencies via a broadband connection.

"We need to be able to reach people to let them know if there is a fire, flood or criminal in the area, and it's gotten harder and harder to do that as people drop their land lines and quit watching broadcast television," said Bruce Patterson, Ammon's technology director. "Our traditional methods of reaching people aren't working and haven't for years."

Cities and other emergency organizations have struggled with the situation as people started dumping land lines for cellphones. Many rely on residents to enroll in texting services or other emergency notification systems or to tell Internet phone providers and others when they have changed physical addresses.



Patterson and the City of Ammon will maintain the system in a technology center at one of the city buildings.

Land lines worked because like the utility industry, companies were assigned to provide service in a particular geographic area. That meant police and others could work with the phone company to get updated information and send alerts to specific addresses.

But with broadband and Internet service, no such regulations exist. People pick their providers and may have several. So to reach residents, emergency organizations would have to work with dozens of providers to get the word out, which is nearly impossible with the current technology.

That is where the Manic, Patterson and the rest of the team come in.

They believe they can create a dedicated, emergency "channel" for broadband that could reach people via an in-home display connected to the Internet. The alert would function much like the notifications that interrupt broadcast television programs.

The virtual emergency channel will be based on Open Flow, a protocol that is able to reach across various computer network resources (it is used by Google, Yahoo and other companies). The goal is to reach people through their Internet providers — since companies track addresses for billing purposes, that information can be used to identify people in a specific geographic area.

"The first step really is to prove this concept will work and that we can create a virtual emergency channel," Manic said.

Though the approach is in its infancy, the project could have far-reaching ramifications — one of the reasons it was funded by the National Science Foundation.

"Your success will not only spur innovation in a national priority area but will also introduce the academic community to a topic where there are few publications outside of standards bodies and the patent literature," Dr. Joseph Lyles, a NSF program officer wrote in an email to Manic.

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